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ABSTRACT

To comply with Ohio state standards, guidelines are provided for local school districts to organize a competency program. Five steps are outlined: (1) planning the program, including budgeting, scheduling, inservice training, coordinating advisory and working committees, and ensuring public awareness; (2) establishing competencies, by developing or reaffirming district goals, defining objectives, and writing measurable objectives; (3) measuring competencies by using either commercial or district-developed tests, other performance measures, or by teacher involvement in defining competencies and observing students; (4) setting minimum standards of performance; and (5) providing remedial instruction for those students who have not performed at an acceptable level. A checklist of evaluation questions is provided to help assess program effectiveness. (CP)

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Competency Handbook

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FOREWORD

In Ohio, as well as nationwide, there is a growing concern about the achievement levels of high school graduates. National reports of declining test scores, rapidly increasing costs of public services and a perceived lack of student achievement have contributed in large part to the impression that schools are not doing as well as they should or could.

In recognition of the issues which have focused considerable attention on the quality of public education, a Task Force on Minimum Competency Expectations was established in the Department of Education in April 1977. The Task Force has coordinated initiatives in the area of minimum competency and has recommended various procedures for action.

Subsequently, in August 1977, the General Assembly directed the Ohio Assessment and Annual Report Advisory Committee—an independent committee authorized by the General Assembly—to make recommendations to the State Board of Education regarding "the implementation of a minimum competency examination as a prerequisite for promotion of all pupils to grades five and nine and for graduation from high school." The recommendations were to be completed by July 1, 1978 and transmitted to the chairmen of the Senate and House Education Committees.

The Department's Task Force, which was well underway in its efforts, worked closely with the Advisory Committee in preparing and developing recommendations. Activities included:

1. surveying the minimum competency practices utilized in the other states,
2. convening a symposium with representatives from states with the most active involvement in minimum competency programs,
3. conducting 13 regional forums on minimum competency to gather testimony from Ohioans about the direction in which Ohio should move,
4. conducting a survey of the status of minimum competency efforts in Ohio, and
5. preparing this booklet which, it is hoped, will be helpful to all concerned in the implementation of a competency program.

The legislature and the public have legitimate expectations for the schools and the young people who attend them. Responding to those concerns in a positive and effective measure will be helpful in resolving the important issues confronting our schools.

This booklet is designed to be used by non-school audiences; a companion handbook has also been developed for use by school officials.

Sincerely,

Franklin B. Walter

Franklin B. Walter
Superintendent of Public Instruction

INTRODUCTION

In June 1978, the Ohio Assessment and Annual Progress Report Advisory Committee completed its report on minimum competency in accordance with the legislation requiring the committee "to make recommendations to the state board regarding the implementation of a minimum competency examination as a prerequisite for promotion of all pupils to grades five and nine and for graduation from high school." The recommendations which were submitted to the General Assembly are as follows:

The purpose of an Ohio minimum competency program should be to improve the instruction and achievement of students through the use of tests for diagnosis of learning problems and planned intervention for individual students.

The Assessment Advisory Committee believes the concerns of the legislature for improving student minimum competencies in the areas of reading, mathematics and English composition can best be achieved by a thorough revision and rigid enforcement of the Minimum Standards for Ohio Elementary, Junior High and High Schools, particularly as they apply to the areas of primary reading, junior high mathematics, junior high reading and composition, high school mathematics and high school composition. Such an effort would mandate that specific curriculum requirements be established in these areas with minimum skills to be mastered clearly stated.

Adequate state funds should be allocated to the State Board of Education for the revision of minimum standards to include a minimum competency program; for providing technical assistance to local districts to implement the competency requirements; and for monitoring and enforcing the minimum standards.

Implementation and enforcement of the revised standards in the skill areas, particularly the requirement for intervention programs in the areas of primary reading, junior high mathematics and reading/composition, and high school mathematics and composition, should be contingent upon an adequate state categorical allocation to local school districts.

Guidelines and recommendations for the revision and expansion of the standards by the State Board of Education should include provisions for:

a. *State level minimum competency committees in each skill area to assist in defining the minimum competencies and establishing the minimum skills.*

b. *A variety of locally determined procedures and alternatives to measure and assess student learning needs.*

c. *Required locally developed intervention programs and alternatives to meet the needs of students who cannot achieve the standards under traditional methods.*

d. *Assurances that intervention programs, especially those which include grouping procedures, are based on demonstrated instructional needs and not on punitive, arbitrary, discriminatory criteria.*

e. *Adequate phase-in time for the implementation, effective date and enforcement of the revised standards.*

f. *Compliance procedures which may include state approval of local plans for measuring competencies and providing intervention programs for those students who do not meet the standards.*

g. No local or state funds should be diverted from the present, basic instructional programs of the schools.

h. The revised standards should not narrow or decrease present instructional requirements.

If not presently empowered, the State Board of Education should seek legislative authority to ensure through a monitoring and reporting process that local school districts are in compliance with the intent of the revised standards to improve the instruction and achievement of students in basic minimum competencies.

The Committee reaffirms its resolution adopted at the April 20-21, 1978 meeting as follows:

"... as a result of their review of the 1977 assessment results and the public testimony of citizens, parents, educators and representatives of educational organizations gathered in 13 regional public forums, no mandated minimum competency testing should be implemented as a prerequisite for promotion to grades 5 and 9 and for graduation."

and further, the Committee is opposed to the use of any state mandated test as a final determination for promotion or graduation.

The following pages outline a process which could be followed by school districts wishing to design or install a competency program in accordance with the Assessment Advisory Committee's report. This publication has been prepared in such a way that the steps outlined are flexible in both sequence and content. In certain communities, some steps have already been taken. In other cases, modifications in the proposed outline will be necessary to fit unique circumstances. In any case, the publication should be viewed as a road map with optional methods for arriving at destinations.

The process suggested throughout this publication is based upon the following assumptions:

1. Effective competency programs are broader than a simple testing system which sorts youngsters into categories. They are instructional and curricular activities which utilize measurement to diagnose student strengths and weaknesses so that proper corrections or supportive plans can be formulated.
2. Measurement is broader than paper and pencil tests. Effective student diagnosis should rely upon multiple methods of measuring student achievement.
3. The important aspects of the education process are what happens before measurement and what occurs afterwards as the follow-up to identified strengths or weaknesses.
4. Education functions best when the initiative, plans and management are kept close to the people. The state has a role to play in charting directions, but the management and day-to-day decisions work best when they are in the hands of a locally elected board of education and locally selected school administrators.
5. Education is the responsibility of the parent, child, community and school. Each has a vital and fundamental role to play and each must complement the others.

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CHAPTER I
ORGANIZING A COMPETENCY PROGRAM

INTRODUCTION

There are a variety of reasons for considering a competency program. Whatever the reason, it is important to have a base of information on which to begin planning. A study—formal or informal—is essential to gather data. It need not be lengthy, time-consuming or costly.

In studying the need for a competency program, it is important for the local board of education to know the objectives of the study, who will be involved and how the results will be used. This information, along with the results of the study, can be used in determining an action plan for developing a local competency program.

Reviewing and utilizing data as a starting point would be helpful. Some methods for collecting further information in the initial study might include:

1. a community survey,
2. an analysis of previous test scores,
3. formal or informal meetings with teachers, students, parents,
4. a review of research and literature,
5. a needs assessment, and
6. travel to school districts having competency programs.

The initial report to the school board should include a cost estimate so that action may be taken to provide a budget.

PLANNING

Once a decision has been made to develop a competency program, a management plan should be organized. This section of the guide is designed to assist school districts in determining who should be involved and what tasks should be undertaken.

A program director is needed because many people will be involved in the development, implementation and evaluation of a competency program. The person selected should be knowledgeable in testing, curriculum and management. The superintendent, a central office staff member, building administrator or other staff member could be the director.

Activities of the director could include:

1. establishing a budget,
2. assisting in selecting an advisory committee,
3. selecting working committees,
4. determining the tasks for all committees,
5. establishing timelines,

6. communicating to appropriate groups,
7. providing inservice programs,
8. identifying resources, and
9. coordinating staff development.

ESTABLISHING A BUDGET

There will be a cost factor in the development, implementation and maintenance of a competency program. Funds should be allotted for budgeting by the program director. Resources may be needed for various activities, such as administrative costs, purchasing supplies and staff time.

SELECTING A REPRESENTATIVE COMPETENCY PROGRAM ADVISORY COMMITTEE

The program director should use a method of selecting advisory committee members that insures representation of all interest groups.

If the district has a functioning advisory or test committee, its members could serve in this new capacity. The following worksheet may be used to determine the representativeness of the existing committee or to identify members of a new committee.

If the advisory committee is a large one, a steering committee may be designated to determine agendas, contact resource people, collect information from meetings and give reports.

The total committee may function in such tasks as gathering information, looking at alternatives and reviewing decisions in an advisory capacity.

One suggested method for selecting a new advisory committee contains the following steps:

1. Determine the maximum number of persons who will make up the committee. On the Committee Membership Worksheet (see sample below), write that number in the last small square at the bottom of the "Total" column.
2. Decide the number of members who should represent each of the groups (e.g., teachers, community representatives). Write in the title of the groups in the columns and the number in the appropriate square at the bottom of each column.
3. Select the total number which should represent each level (e.g., primary). Write that number in the box at the end of each row under "Total".
4. Determine the number needed to represent each cell (e.g., primary level teacher). Write that number in the small square in the upper right-hand corner of each appropriate cell.
5. Write the names of prospective committee members in the appropriate grade level-position cell. Be sure to give consideration to a balanced representation of the different school types (e.g., inner city, outer city) within your district.
6. Send letters of invitation to prospective members. Include all relevant information, such as the length of tenure as member, the approximate number of meetings, and whether or not meetings will be held during school time.

7. Substitute names of alternates for those who decline the invitation. Continue until the representation of the committee is satisfactory.
8. Announce the organization meeting date, time and place.

COMPETENCY PROGRAM ADVISORY COMMITTEE WORKSHEET

Level/Position						Total
Primary						
Intermediate						
Junior/ Middle						
Senior						

Note. One or more of these cells may have no representation; in that case write 0 (zero) in the appropriate square.

The selection of teachers should include representatives from several subject areas including academic and nonacademic disciplines. The administrator cells should include building level as well as central office supervisory administrators.

It is important for the committee to have content and measurement specialists. This group may be school counselors, school psychologists, curriculum directors and testing coordinators.

Because of the variety of community groups, it will be necessary to determine how to obtain the widest possible representation. Included should be parents, employers, university or college staff, students, teachers and other major interest groups in the community.

SELECTING WORKING COMMITTEES AND DETERMINING THEIR TASKS

During each phase of program development, working committees will be needed. The makeup of the committees may vary depending on the task. The program director should determine the extent of the activity and how many people are needed to complete the task. Building administrators should assist the program director in selecting committee members.

Working committees may be designated for such activities as:

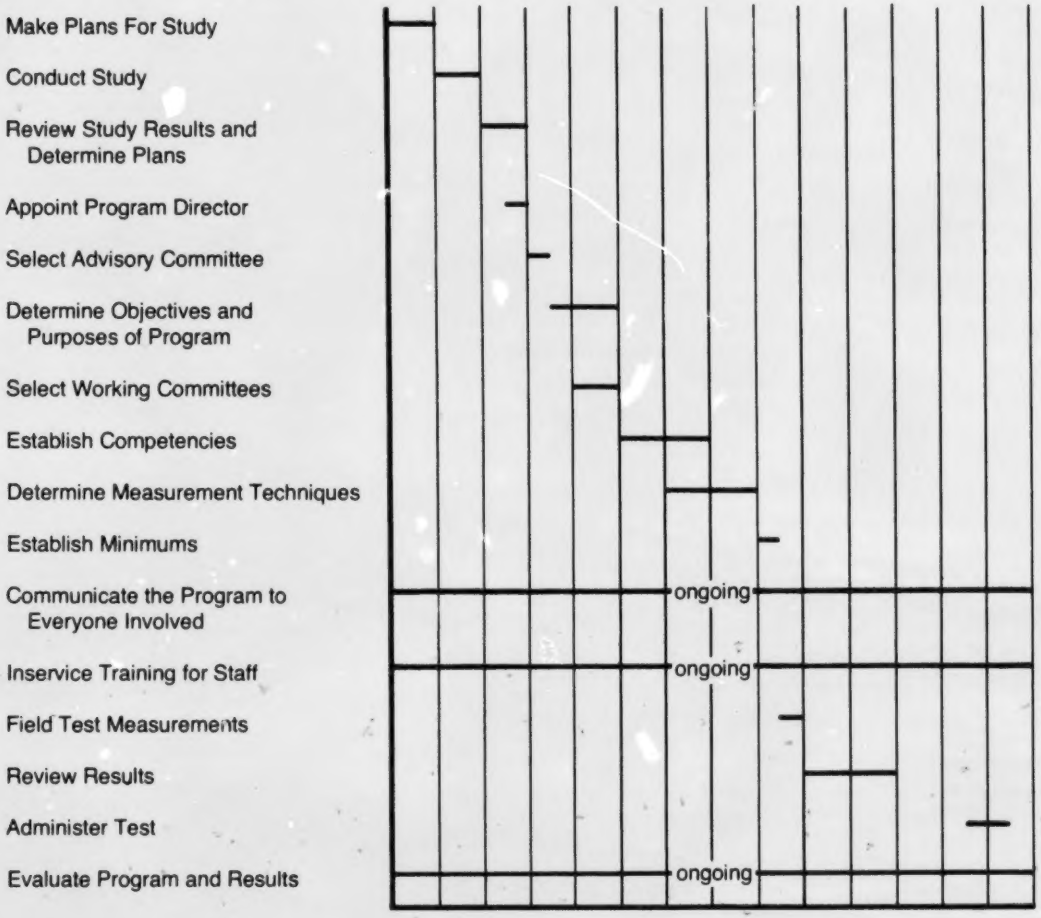
1. reviewing courses of study,
2. developing a list of competencies,
3. studying a variety of methods for measuring competencies and making recommendations,
4. developing local measurement techniques and instruments,
5. selecting existing measurement instruments which assess designated competencies,
6. establishing performance standards,
7. planning intervention strategies, and
8. developing evaluation techniques for the competency program results and process.

ESTABLISHING TIMELINES

A timeline, based on the projected date for competency measurement, should be established by the advisory committee and program director. Working backwards from the projected date, deadlines for major activities can be determined.

Below is a sample timeline for the development of a total competency program. Persons involved in each activity should have specific dates for completion of the task.

SAMPLE TIMELINE FOR COMPETENCY PROGRAM DEVELOPMENT

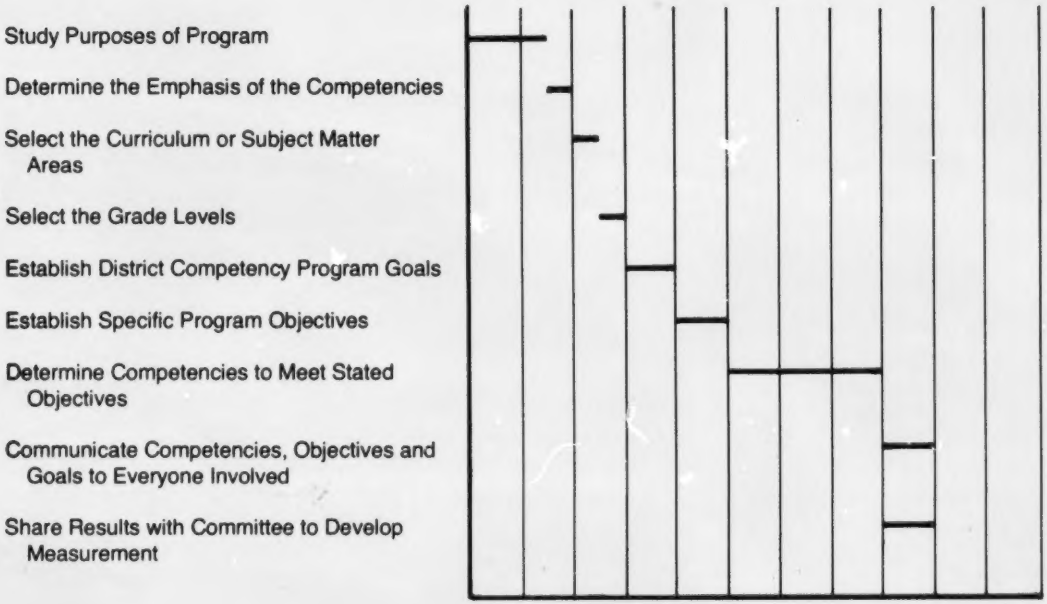


Each working committee will need to know what time limits have been placed on its specific activity within the total timeline. The importance of each task being completed within the allotted time will magnify as the final date approaches. For this reason the project director needs to monitor all committees' activities closely.

A sample working committee timeline shows one segment of the total program timeline in detail.

SAMPLE TIMELINE FOR A WORKING COMMITTEE

(Establishing Competencies)


Study Purposes of Program
Determine the Emphasis of the Competencies
Select the Curriculum or Subject Matter Areas
Select the Grade Levels
Establish District Competency Program Goals
Establish Specific Program Objectives
Determine Competencies to Meet Stated Objectives
Communicate Competencies, Objectives and Goals to Everyone Involved
Share Results with Committee to Develop Measurement

COMMUNICATING THE PROGRAM TO THOSE INVOLVED

Providing information to the public concerning all significant developments of the competency program is essential. Lack of information or misinformation may impede the successful implementation of a district's program.

Separate meetings may be held with parents, students and school personnel to explain the program, its effect on the education of students, and the role the group plays in the total program. The program director should be available to answer any questions which individuals or the group might have concerning their roles in the program's implementation.

The community-at-large may be informed through the news media. Brief, factual news releases can provide a continuing update of program development, implementation and evaluation. Consideration might be given to establishing a local telephone hot line for specific information concerning the competency program. When measurement results become available, another phase of communication must be planned.

PROVIDING INSERVICE PROGRAMS

The tasks of establishing competencies, measuring competencies, establishing minimums, developing remedial or intervention strategies, and evaluating the program segments will probably be new to some members of the working committees. It becomes an important task of the program director to provide the resources and consultants for meaningful inservice meetings.

Other areas to be considered for inservice training include administrative techniques for the various measures, interpretation of measurement results, and methods for integrating the results back into the curriculum.

IDENTIFYING RESOURCES

The director and the advisory committee should review the literature, materials and research available on competency programs. A procedure should be established for assuring that the materials and information are given to the working committees.

Making maximum use of outside resources and consultants in the development of a local competency program is essential. The tasks of planning and implementing a competency measurement program are complex and often require very technical skills.

A resource file, which is centrally located and adequately indexed, can be important to anyone interested in gaining additional information regarding competency programs. The file could assist school personnel in answering questions raised by community members. Resource persons should be listed also in the central file for quick access.

COORDINATING STAFF DEVELOPMENT

As the program is being organized, staff development regarding competency programs should be coordinated. Initially, awareness meetings should acquaint staff with the basic concepts and terminology needed to work with competency programs and the purposes for beginning the study. The various phases of program development and the commitment needed from the total staff should be explained.

It will be important for the staff to realize individual roles as well as the total staff's activities in program development. Continued inservice meetings should update plans and activities of the program. Special working groups may be involved in meetings concerning specific tasks to be accomplished.

CHAPTER II
ESTABLISHING COMPETENCIES

INTRODUCTION

Competencies are generally defined as what students should be able to do to be successful in school and in their daily lives.

Establishing competencies involves three major steps:

1. developing or reaffirming the school district's philosophy and goals of education,
2. defining objectives which are intended to meet the goals and philosophy, and
3. identifying specific desired learner outcomes which are intended to achieve the objectives.

Some school districts may decide that competencies are more appropriately established by revising or expanding the present curriculum. Others may decide to select specific competencies which relate to or build upon present goals and objectives. In either process, the expectations for desired learner outcomes should be clearly communicated to parents, students and educators and be consistent with the district philosophy.

Careful planning is necessary to establish basic principles and guidelines to provide a framework for decision making. The following issues should be addressed by the advisory committee:

1. What is the purpose of the competency program?
   Purposes might include:
   a. establishing competencies to determine student promotion or graduation,
   b. identifying students' strengths and weaknesses,
   c. planning instructional alternatives to improve student achievement, or
   d. evaluating the school curriculum.
2. What competency areas will be addressed?
   Competencies might be established in:
   a. basic school skills,
   b. all subjects or curriculum areas,
   c. selected subjects (communications, social studies, the arts),
   d. functional life skill areas, or
   e. a combination of the above.

3. What grade levels should be used for measurement?

   Desired learner outcomes may be assessed at:

   a. all grade levels (K-12),

   b. selected grade levels (4, 8, 11), or

   c. organizational sections (primary, junior high, high school).

4. Shall there be individualized or uniform competencies?

   Competencies may be established which:

   a. are the same for all students regardless of abilities or interests, or

   b. vary according to the needs of individual students.

The following is a brief description of alternative methods which may be used in establishing competencies. The methods may be used to revise the present curriculum or to develop a specific set of competencies. Existing goals and objectives may provide an appropriate basis for establishing student competencies.

ESTABLISHING DISTRICT GOALS

Before a district embarks on a competency program, the board of education should establish or reaffirm the school district philosophy. The philosophy is a statement of basic education principles describing the framework within which the school operates. It should reflect the expectations of the community, students and educators; the nature of the educational process; the characteristics and needs of students; and the content, methods and outcomes of instruction.

A working committee should specify goals to provide direction to educators and parents. Goals are general statements of desired learner outcomes which reflect the philosophy of the district.

The working committee should provide opportunities for many groups to participate in development of goals, such as parents, students, teachers, employers, school administrators, board members, elected officials and others. The following approaches are suggested.

The advisory committee could list goal statements and survey the public for its reaction. Statements may be obtained from the present goals or from other districts, state departments of education, textbooks and other sources.

Respondents could rate the goal statements on a scale by levels of importance, i.e., deciding whether the goal was considered of little, minor, average, major or critical importance to them. The survey might be sent to all residents, educators and students in the community or to a sample population. Other options include discussion at small group meetings, publication of the survey in the newspaper, and distribution at a county fair. Responses should be tabulated to identify priority goals.

Another method for establishing goals is to use the nominal group process model to generate ideas and priorities from individuals.

A third approach is to assign the responsibility for determining district goals to a goal setting committee for board approval.

The following example illustrates the form that a goal setting survey might take.

SAMPLE GOAL SETTING SURVEY

Goal Statements	Levels of Importance				
Each student should have:	Critical	Major	Average	Minor	Little
1. Basic skills in reading	5	4	3	2	1
2. Basic skills in writing	5	4	3	2	1
3. Basic skills in mathematics	5	4	3	2	1
4. Appreciation for various cultures	5	4	3	2	1
5. Knowledge of good health habits	5	4	3	2	1
6. Knowledge necessary for responsible citizenship	5	4	3	2	1
7. Knowledge to secure employment	5	4	3	2	1
8. Skills to work effectively with groups	5	4	3	2	1
9. Knowledge of sound consumer practices	5	4	3	2	1

ESTABLISHING OBJECTIVES

The next step in establishing competencies is the translation of the general district goals into specific objectives in various curriculum or subject matter areas.

Objectives are statements which set forth in specific terms the necessary skills, knowledge and attitudes which must be acquired by students to attain the educational goals. Objectives may be written at various levels of difficulty depending on the abilities of the students for which they are written and the curriculum content. Competencies may be established as basic, enrichment or maximum desired learning outcomes.

Working subcommittees of administrators, classroom teachers and education specialists representing various grade levels and subject matter areas should write curriculum objectives for each related goal area. Again, objectives may be obtained from other sources.

A procedure should be established to review and refine the objectives to confirm quality and appropriate relationships to the goals. Several objectives may be written for each goal statement. The following are examples:

SAMPLE OBJECTIVES

Goal: Each student should have basic skills in reading.

Objectives:

1. Each student will use word attack skills to identify words in written or oral form.
2. Each student will be able to determine the meaning of a word by knowledge of its common usage.

Goal: Each student should have basic skills in writing.

Objectives:

1. Each student will know the rules of spelling, punctuation and capitalization in his or her writings.
2. Each student will be able to structure appropriate grammatical units (e.g., words, phrases, clauses, sentences, paragraphs, compositions).

ESTABLISHING STUDENT COMPETENCIES

A competency can be defined as a statement of a desired learner outcome expressed in clear, concise and measurable terms. The outcome usually describes an application of the skills, knowledge or attitudes considered to be components of the stated objective.

Administrators, classroom teachers and other educational specialists should be involved in developing specific competency statements which relate to each objective.

Review procedures described for developing goals and objectives should again be implemented to determine the appropriateness and quality of the competency statements.

There may be several competencies related to each objective. The following are examples of competencies written for sample objectives for two different grade levels.

SAMPLE COMPETENCIES

Goal: Each student should have basic skills in reading.

Objective: Each student will use word attack skills to identify words in written or oral form.

Competencies

4th grade	11th grade
1. The student will identify beginning, middle and final consonants in words.	1. The student will make use of diacritical marks for correct pronunciation.
2. The student will decode words containing the hard and soft sounds of "c" and "g" in a sentence.	2. The student will pronounce words correctly.

Goal: Each student should have basic skills in writing.

Objective: Each student will know the fundamentals of spelling, punctuation and capitalization in written form.

Competencies

4th grade	11th grade
1. The student will use correct capitalization and punctuation in letters.	1. The student will capitalize main topics and subtopics of an outline.
2. The student will spell his or her own complete address correctly.	2. The student will capitalize names of organizations, institutions and buildings in sentences.

Criteria to establish and review competencies are listed below. (Adapted from criteria developed by the Northwest Regional Educational Laboratory.)

Teachability

1. Is it possible for the schools to teach the knowledge, skills and attitudes described in the competencies?
2. Is curriculum available related to the individual competencies?
3. Will remedial programs, if needed, be available now or in the near future?

Acceptability

1. Do the competencies represent reasonable standards of proficiency to be required of all students?
2. Are the competencies free of statements that suggest that some social, occupational or life roles should be valued more than other acceptable roles?
3. Are the competencies universally applicable across lines of sex, socioeconomic status, race, rural or urban settings, and religious persuasions?
4. Are the competencies reasonable, appropriate and important outcomes of the total educational experience?

Importance

1. Are the competencies generally agreed to be necessary outcomes for student success in school or their daily lives?
2. If competencies are to be used as a basis for promotion or graduation, do the competencies represent levels of student proficiency and accomplishment of sufficient importance?

Generalizability

1. Are the competencies achievable regardless of students' sex, socioeconomic status, race, rural or urban setting, and religious belief?
2. Will all students for whom a particular competency is applicable be exposed to sufficient instruction to achieve the specified knowledge, skill or attitude?
3. Do the competencies avoid implying endorsement of curriculum approaches which are not common to all schools?
4. Are the competencies appropriate for those students who transfer within the state?

Feasibility

1. Are the outcomes specified by the competencies quantifiable through some acceptable operational measures?
2. Can the competencies be measured within the schools' time constraints and resources?
3. Will adequate educational resources (e.g., time, staff, money, books and materials) be made available to support the implementation of the competencies now or in the near future?
4. Are the competencies free of specifications which would require special equipment or facilities which are not available to most students?

Specificity

1. Are the competencies worded specifically enough so that it is clear what skills are and are not included in the competencies?
2. Are the competencies prescriptive so as to specify student inadequacies?

Clarity

1. Are the competencies free from educational jargon or other unusual word uses?

2. Are the competencies stated clearly and succinctly?
3. Are the competencies written so they communicate effectively to students, parents, community members, teachers, administrators and other interested individuals?

INSERVICE

The process of establishing competencies is a complicated one requiring the contributions of teachers, administrators, school board members, content area specialists, parents, students, employers and measurement specialists. In this developmental stage of a competency program,the need may arise for inservice training for the members of the various working committees as well as the advisory committee. The type and level of training depends on the existing level of expertise of the persons involved in the various tasks. Needed inservice training should be identified, if possible, in the planning stage of a competency program so that it can be scheduled early. Inservice training may be required for:

1. setting goals,
2. defining objectives,
3. establishing competencies, and
4. writing measurable objectives and competencies.

COMMUNICATING TO THOSE INVOLVED

Appropriate procedures should be used to report the progress and deliberations of the committee to the public. Opportunities should be provided for review and comment to obtain public consensus on the purpose of the competency program and the goals, objectives and competencies. Procedures may include public meetings, surveys, interviews, newsletters and appropriate news releases.

CHAPTER III

MEASURING COMPETENCIES

INTRODUCTION

Competencies may be measured by any one or a combination of the following:

1. teacher observation and judgment,
2. paper and pencil tests, and
3. performance tasks.

The following suggestions are offered as steps in the process to provide adequate measures of competencies:

1. Identify the measurement information needed.
2. Decide whether this information can be obtained from an existing measure or from one to be constructed.
3. Use an appropriate selection process or acceptable construction techniques to obtain a valid measure of each competency.
4. Plan for administering and scoring the measures and reporting and using the results.

Each of these steps is explained below.

IDENTIFYING THE MEASUREMENT INFORMATION NEEDED

In order to select or construct an appropriate measure, it is important to define what information is needed. The following list of questions may be helpful in guiding the group which is responsible for measuring minimum competencies.

1. How will the information be used?
2. In what context do you wish to interpret the information?
3. Who will use the results of the instruments?
4. What is the most direct measure of the selected competencies?
5. What type of score is necessary?

DECIDING WHETHER TO USE EXISTING INSTRUMENTS OR CONSTRUCT NEW ONES

Whether to use commercially prepared or teacher-made instruments is a decision which will be made as the following questions are answered:

1. Do the available instruments measure the competencies selected?
2. If local resources are available, can they be allocated to design and produce measurement instruments?
3. Does your timeline permit constructing new measures?

4. Which measures will have better technical quality (e.g., validity and reliability)?
5. Is it possible to use a combination of commercially and locally prepared instruments?

SELECTING OR CONSTRUCTING APPROPRIATE INSTRUMENTS

Although this section is divided into two parts including materials for selecting instruments and suggestions for constructing them, it is possible that both sets of materials will be needed.

The process of selecting measures may include the following steps:

1. Determine how much of the necessary information is already available. (See the earlier section on measurement information.)
2. Decide why the instruments will be given (purposes).
3. Determine the most direct measures of the competencies.
4. Determine the relative importance of other criteria (e.g., cost, time, technical quality, etc.).
5. Review instruments in terms of criteria established in the first four steps above.

Measurement information may generally be grouped into two categories: norm-referenced and criterion-referenced. As you decide which type is needed, remember the following cautions.

Cautions Related to Norm-Referenced Information

1. When norm-referenced tests are used to certify mastery of competencies, a specified percentage of the pupils statewide or district-wide will "fail." For example, if the minimum level for passing a reading competency test is set at the 20th percentile, 20 percent of those tested will fall below that level by definition. Similarly, approximately 50 percent of all fifth graders will score below grade level.

2. If norm-referenced instruments are used for determining progress between two points in time, progress most probably will not result in higher scores. For example, the fourth grade student who achieves a stanine of five at the beginning of the year and a stanine of five at the end of the year has demonstrated progress at the same rate as the norm group. A higher stanine at the end of fourth grade may indicate that the student has progressed faster than the norm group while a lower score may indicate that progress was less than that of the norm group.

3. When normative comparisons are used to show change for individuals or groups, one should know that some scores such as percentiles, normal curve equivalents, and grade scores may magnify any raw score difference. Other scores, such as percentile bands and stanines, may, in effect, conceal raw score differences. One should decide in advance if a stable index such as a stanine is desirable or if the reporting units should be sensitive to any small change which occurs.

4. When normative information is used, progress is defined in terms of the norm group. Little or no information is available about how well the norm group is doing as compared to what might be expected.

Cautions Related to Criterion-Referenced Information

1. Raw scores (e.g., three out of four correct) may have little meaning outside of the measures used. For example, many different problems could be constructed to measure a student's mastery of the addition of whole numbers. These measures would not be equally difficult for a population of fifth graders. Some of the measures might be very easy; others might be very difficult. The information that one receives, therefore, may depend as much on the structure of the measure as on the abilities of the students.

2. The number of questions constructed for each competency is often so small (two, three or four) that decisions about specific competencies are usually much less reliable than decisions across the goal area. Example: A student answered correctly one of two items on alphabetizing and 16 of 20 items in the overall study skills. Any statement about a student's competence in alphabetizing is much less stable than a statement about the study skills for this student.

3. Many criterion-referenced measures do not claim to contain a representative sample of skills from the total domain. For example, a measure may adequately sample four or five competencies in reading comprehension but not reflect the total domain. Total scores from such an instrument should not be used to make a decision about students' competence in reading comprehension.

A second major consideration in selecting instruments is matching purpose for testing with instruments designed for such use. For example, short survey reading tests may not be too useful if the reason for testing is to diagnose specific strengths and weaknesses.

A third consideration in choosing an instrument is whether or not it is a direct measure of the competencies selected. For example, if eighth grade students should be able to comprehend a passage randomly selected from a social studies text, the measure must incorporate such a passage. Interpretation questions based upon a poem, while perhaps very important, are not direct measures of the stated skill. Similarly, teacher observation of a student reading orally from the social studies book is not a direct measure of the student's comprehension.

A fourth consideration is that of determining the relative importance of all other test selection criteria. A checklist of criteria is provided below so that the committee can decide which factors are most important and which are least important to achieve the purposes.

Finally, the committee is ready to review instruments. One of many ways to decide which instruments to critique is the Nomination Form below. List the names and publishers of instruments which may meet your needs. Complete only the relevant cells.

INSTRUMENT NOMINATION FORM

	Criterion-Referenced			Norm-Referenced		
	Test Name	Level/Form	Publisher	Test Name	Level/Form	Publisher
Reading Skills						
Writing Skills						
Math Skills						
Basic Skills Battery						
Life Skills						
Other (Specify)						

Obtain and critique the instruments which are nominated. Evaluate the instruments in terms of previously established purposes and other selection criteria. Remember that the most important criterion is content validity, i.e., measuring the right competencies. If two or more instruments measure the competencies, other selection criteria should be used.

Constructing or Modifying Your Own Instrument

The general guidelines offered in Table I apply when constructing or modifying any measurement device.

TABLE I

GENERAL GUIDELINES FOR MEASUREMENT

1. Standard directions for each task or group of tasks should be written and pretested.
2. Time allotments, if appropriate, should be established and tested in advance.
3. Each task should accurately reflect the competency which it is designed to measure.
4. Each task should be clear-cut and concise.
5. The tasks measuring the same competency should be independent, but similar in difficulty.
6. Bias against subgroups (e.g., sex, ethnic) must be controlled or eliminated.
7. Scoring methods and weights, if any, should be set in advance.

Guidelines for, and selected examples of, different classroom measurement techniques are suggested below together with advantages and disadvantages for each technique.

SELECTED RESPONSE TEST ITEMS

Classroom achievement tests should measure learning in relation to teaching objectives, using the most comprehensive sampling possible. Selected response tests (i.e., multiple choice, true-false and matching) offer the greatest potential for sampling because more questions can be asked in a set length of time; they are usually more accurate and precise. Thus the selected response technique is most often used by measurement experts and teachers.

Advantages

1. A selected response test is very easy to score.
2. It is objectively scored; that is, the answer is predetermined and any grader should arrive at the same test score.
3. It measures simple recall or higher level knowledge.
4. It requires less test-taking time; therefore, more questions can be answered and a greater sampling of the material can be achieved.

Disadvantages

1. Correct answers may sometimes be inferred from the item itself.
2. Some items test recall of trivial knowledge.
3. Constructing accurate and precise items is difficult and time-consuming.
4. Correct answers may be achieved by guessing.

CONSTRUCTED RESPONSE ITEMS

A test item which requires the student to create a response rather than to select one is called a constructed response item. Math computation items are often in this category as are the more complex story problems frequently used in advance math and science content areas. The counterpart from other content areas is the completion question. The essay test is another type of constructed response test. Items are relatively easy to write, but often are difficult to score due to the variety of correct responses available to students.

Advantages

1. A constructed response test is comparatively easy to prepare.
2. It lends itself easily to measuring higher level cognitive knowledge.
3. It may yield additional insights to other learning.

Disadvantages

1. A constructed response test is hard to score.
2. It is subject to the scorer's biases.
3. It does not offer adequate coverage of a content domain.
4. It often measures extraneous skills. (e.g., writing skills are measured as well as knowledge of content.)

PERFORMANCE MEASURES

The paper-and-pencil test had been the primary vehicle for measuring educational growth until recently when a great deal of effort went into developing performance-based tests. The essence of the performance-based test is that if a performance or skill is to be measured, there should be direct, not indirect, means of measurement. For example, certain types of knowledge are essential to drive an automobile, yet having this knowledge in no way guarantees that one will be a skillful driver. Measurement of driving skill should involve actual driving performance tasks in addition to knowledge-based paper-and-pencil test. Performance can be directly observed. Some learning outcomes are best measured by means of performance-based tests. The techniques include observation, rating scales and checklists.

In observation, one notes the presence or absence of an observable behavior, e.g., a child tying a shoelace, putting things away, stacking blocks or completing a puzzle.

Rating scales are numerical descriptions of behavior. The observer views a performance or product and records a numerical judgment on a rating scale.

Checklists resemble observation, except that a checklist focuses attention on sequences of related behaviors. A sequence might include assembling equipment or performing a series of tasks.

IMPLEMENTING AN EFFECTIVE SYSTEM OF TEACHER JUDGMENT

Teacher judgment is exercised every instructional day. In certain areas of measurement, teacher judgment is most practical. The question, then, is not "Should teacher judgment be used within the district's measurement system?" but rather "How can teacher judgment make the measurement system efficient, comprehensive and useful?"

Below, the steps of competency assessment are discussed in direct relation to teacher judgment. These steps are: specifying the competency, specifying the performance characteristics of a competency, developing the means to gather performance information, developing the standards to be used in making judgments, judging the competency performance, and taking action.

Specifying a Competency

The district may have already specified its competency requirements. However, the measurement task draws a distinction between writing a competency and defining it in a way that its acquisition can be observed.

Defining competencies is crucial to the measurement task since it provides a common framework around which to design the measures.

Specifying Performance Characteristics of a Competency

Once competencies have been defined, student performance must be considered. Observation may span simply noting facts or occurrences to actually drawing conclusions.

Gathering Performance Information.

Measuring student competence is the next step, and it has two parts: 1) eliciting a performance and 2) measuring the performance relative to desired criteria. These activities will produce information on the presence or level of a student's competency.

Developing Standards for Making Judgments

The measurement design should include some rules for decision-making that anticipate variations in student performance. These decision rules clarify further what it means to possess a competency. For example, if a student passes the knowledge test but fails on other criteria, a decision rule might be that possession of the knowledge alone is insufficient.

Judging Competency Demonstration

Ensuring that judgments are not unduly affected by inappropriate influences is the most critical part of the competency assessment process. No matter how carefully planned the system, such influences are always present. Conditions or influences which must be guarded against are:

1. public or teacher indifference about the characteristics to be judged,
2. differences in interpretation of the competency characteristics that are to be judged,
3. friendships with students and/or parents,
4. apprehension over possible lack of administrative support,
5. "first impressions" of students,
6. student appearances (unrelated to competency characteristics),
7. jumping to conclusions (based on unrelated observations),
8. guessing on the basis of inadequate observation (gambling),
9. prejudices or prior experiences,
10. halo effects (coming from preceptions of general student abilities),
11. comparing students to each other rather than to the competency characteristics to be judged,
12. knowledge of students (and families) based on previous experience with other siblings,
13. granting credit rather than asking for help in designing activities that develop the desired characteristics in students,
14. having a need for the class to "look good" (i.e., everyone acquired the characteristics to be judged),
15. the "standing" of student's family in the community,

16. a lack of training and experience in the manner learners of varying characteristics may display desired characteristics, and
17. granting or withholding credit for competency attainment as a reward or punishment incentive, irrespective of student performance.

Taking Action on Competency Demonstration Data

Testing and observation provide information for a decision. If all criteria are met, the teacher may indicate that a particular competency has been demonstrated. Any competencies that are not demonstrated should be identified with recommendations made for further work:

When credit for a competency cannot be granted, what to do should be clear. A listing of those performance indicators not demonstrated can be given to the student or the parent to show why credit was not given. A statement of the instruction available should also be given. The important thing is to employ positive action that reflects good planning, a sense of purpose and a concern for the continuing development of the student.

Periodic review is one approach to managing a system in which teacher judgment plays a significant role in determining competency acquisition.

Technical criteria should be applied in any construction or selection process. The technical guidelines are not independent of each other. Any measure that produces valid information in a reliable fashion meets the standard for good measurement, but eventually, the technical guidelines themselves need to be verified.

PLANNING FOR THE ADMINISTRATION, SCORING, INTERPRETATION AND USE OF MEASUREMENT DEVICES

The advisory committee and the project director should plan for good orientation, administration and interpretation procedures. A checklist of activities, procedures and policies will help maximize the proper utilization of test results. Items on such a checklist may also be used by the project director as an evaluation guide to see whether or not the planned activities are accomplished.

COMMUNICATION

Announcement of the types of measures, dates of administration, expected results and obtained results should be made to all school staff, parents, students and other community members. The type and amount of information included, as well as the vehicle for disseminating, may vary depending upon the audience. It is very important that everyone understand the uses and limitations of all measurement devices used. Accurate and concise statements given promptly to the public will prevent many misinterpretations, rumors and abuses.

INSERVICE TRAINING

The inservice element should be considered as two separate units: inservice for the selection or construction of instruments and inservice for the administration, scoring and use of instruments. The overall validity of the entire competency program will depend heavily on how good the instruments are and on how well they are used. Resource persons for district inservice programs may include people from another district engaged in a similar project, Department of Education personnel, college and university consultants, and test company representatives.

One important point to remember is that choosing or developing a good instrument will not assure that the results are valid and reliable for the purposes intended. To assure the best use of results, additional help must sometimes be given to those who will make decisions based upon the results of these instruments.

SUMMARY OF IMPORTANT CONSIDERATIONS

1. The measurement tasks need not be paper and pencil. For example, teacher judgment plays a very important role.
2. The most direct measure of the competency should be selected whenever possible.
3. Instruments may be either commercially prepared or locally developed or some combination.
4. In addition to establishing content validity, the selection process may include determining what information is needed, what the purposes for testing are, what criteria are most important, what instruments are available, and how the available instruments compare on highest priority criteria.
5. The following should be included in the construction process: accuracy, precision and efficiency. The possible types of tasks should be weighed in terms of advantages and disadvantages including the amount of information yielded by each.
6. Effective communication of test type, dates and results to students, parents, school staff and community is necessary to ensure success of the program.
7. Inservice should be planned in two stages: inservice in choosing and/or building instruments and inservice in using instruments.
8. Resources, including staff and printed materials, are available to provide assistance in developing a measurement system.

CHAPTER IV

SETTING THE MINIMUMS

INTRODUCTION

How well should each student perform the tasks? There is no one correct level (e.g., two out of three correct) nor is there one formula for setting a level of acceptable performance. This chapter will include the following sections in an attempt to provide assistance on this complex task:

1. general statements about setting the minimums,
2. identification and discussion of some major issues,
3. description and critique of alternate methods, and
4. summary of the steps in setting minimums.

GENERAL STATEMENTS ABOUT SETTING MINIMUMS

1. Setting the lowest acceptable level is highly subjective. There is no one objective method which yields the right answer.
2. Setting minimums should be considered in the context of political, financial, legal and professional issues as well as technical issues.
3. Setting minimums should never be viewed as a simple one-step process. The task is very difficult and time-consuming.
4. Although the process may be subjective and complex, the decisions should always be based upon data.
5. The process for setting minimums should always include a review to determine whether or not the original expectation (minimum) seems to work.
6. The levels which are set, although very important, may have little or no meaning unless the competencies themselves are clearly defined.

IDENTIFICATION AND DISCUSSION OF SOME MAJOR ISSUES

Although the overall concern is how high the minimum should be, some other major questions include the following:

1. Should the standard be based upon an arbitrarily established criterion, or should the cut-off be established according to the performance of some norm group?
2. Should there be more than one minimum depending upon the different needs of different groups of students?
3. What happens to the student receiving special education services?
4. Who should set the minimum levels?
5. Will the "minimums" become "maximums"?

DESCRIPTION AND CRITIQUE OF ALTERNATE METHODS

This section provides a list of examples of different bases for setting minimum performance levels, together with advantages and disadvantages for each. Suggested steps for setting minimums will be offered in the next section.

1. A minimum level is set independently for each competency (e.g., two out of three tasks correct).

   Advantages

   a. This method represents the most direct application in prescribing instruction.

   b. Standards may be easier to set.

   Disadvantages

   a. This method suggests a fragmentation of skills. It may be possible for a student to master each skill but not be able to put all of the skills together.

   b. The smaller number of tasks used to measure each competency may limit the meaning of the results.

   c. This method could result in a majority of students needing some type of remediation. This could prove costly.

2. A minimum level is set for each major grouping of skills (e.g., all competencies associated with reading comprehension are grouped together and a minimum level is set for the broader area).

   Advantages

   a. The results of measuring competencies are usually more reliable and the conclusions more consistent than when minimums are set for each competency.

   b. The reporting and record keeping is reduced.

   Disadvantages

   a. It may be difficult to decide which competencies to group together.

   b. It may be more difficult to achieve agreement on a minimum for a broad area than for specific areas.

   c. The results do not pinpoint specific student needs.

3. This method combines the previous two methods, that is, a student must achieve a particular standard on each competency and pass a certain percentage of the competencies in a given area. For example, a student may have to pass two or three items on alphabetizing and pass 75 percent of all competencies in study skills.

   Advantages

   a. This system provides much information which will be useful for prescribing instruction.

b. This system allows for some flexibility in that a student can meet requirements without "passing" standards on all competencies.

Disadvantages

a. Some competencies in an area may be more crucial than others. A student could fail the most crucial and still pass the overall measure.

b. The number of standards which must be set is increased.

c. Record keeping may be complicated, particularly if records are kept for specific competencies.

All of the aforementioned methods assume that criteria are established for raw scores or percentages of tasks. These levels are sometimes set arbitrarily, but they are more defensible when established after some pretest of an appropriate group. This pretest may mean, for example, determining the entry-level job requirements for that competency. All three methods described above are criterion-referenced comparisons. For cautions related to making such comparisons, see an earlier section in Chapter III.

4. Another method for setting standards is to use a normative cut-off (e.g., the 16th percentile on the eighth grade norms or below grade level).

This method can be applied in a specific area such as vocabulary or the total area such as reading. Before employing this, review the cautions presented in Chapter III for interpreting normative information. In addition, the following advantages and disadvantages are listed.

Advantages

a. Few people would oppose providing additional assistance to students who score lowest on competency measures.

b. Reporting scales are already familiar to many parents and students (e.g., stanines or percentiles).

c. There are also advantages similar to those discussed with the other three methods as one goes from setting minimums for each competency to setting one benchmark for the total area.

Disadvantages

a. As noted earlier, a specified percent of students will always fail.

b. Information on how well students perform, except as compared to others, is not provided. It does not pinpoint specific weaknesses.

c. There are also disadvantages similar to those discussed in earlier sections as one goes from setting standards for each competency to setting one standard for the total area.

It is important to note that minimum levels may be established in areas other than skills or competencies. For example, a school may establish minimums for the number of days in attendance, the number of high school credits, the number of classes attended, or the number of years of English required. The methods described above and the steps suggested below may have limited value in establishing minimum levels in these areas.

SUMMARY OF THE STEPS IN SETTING MINIMUMS

The following set of procedures is one of many that could be used for establishing criteria for performance. These guidelines may be applied regardless of which method is selected from the earlier section.

1. Perhaps the most important aspect of setting minimum levels is clearly defining the competencies described in Chapter II.
2. The advisory committee decides upon a strategy for obtaining input from various audiences. This could be accomplished through:
   a. a formal survey of a representative sample of all in the community,
   b. an informal survey conducted by different members of the advisory committee assuming that each represents an important audience, and
   c. a structured interview of a carefully selected, stratified sample.
3. The advisory committee decides which method (as described in the previous section) will be used. The committee is given appropriate training on how to implement the method.
4. The tasks used to assess competencies are pretested on an appropriate sample (or other relevant data are collected), and the results for each competency, subarea or total goal area are reviewed by a work group, perhaps teachers who have been trained to implement the method.
5. Using the information from the pretest, the work group sets tentative minimums for each competency or area.
6. The advisory committee constructs a form on which respondents will indicate whether they agree or disagree with the minimum criteria. If they disagree, they should be able to indicate whether the minimum is too high or too low. For example, if minimums are to be set for each competency, a form could be constructed to include the list of competencies, an example measure for each, a place for each respondent (identified in 2 above) to agree or disagree with the minimum, and a place to suggest what the minimum should be.
7. The work group reviews the data from this survey and makes a final set of recommendations to the advisory committee.
8. After revision by the advisory committee, the competencies, example measures of each, and minimums are submitted for adoption by the board of education.
9. Competencies, example measures, and final standards are then communicated to all audiences, including educational staff, parents, students and community.

COMMUNICATION

1. Carefully prepared releases about minimum competencies should be sent at various stages to school staff, students, parents, etc.
2. Although progress reports should be released throughout the process of establishing minimum competencies, the following represent important checkpoints when communication is mandatory:
   a. To secure the cooperation of various audiences, an initial release describing the process of how minimum levels will be established.

b. To highlight the efforts of the advisory committee and work group, interim reports can describe what each group is or will be doing.

c. To indicate what all students might be expected to know or do, sample competencies, measures and minimum performance levels may be published.

d. To show all groups precisely what will be required, a list of all minimums may be provided. This may be accomplished by holding public meetings, reporting in the local paper, or other techniques discussed in Chapter 1. Be sure to distinguish between sample minimum levels and those which are mandated by the board.

e. To describe how well students at a particular grade or in a particular program are doing, a report of results could be made to highlight both strengths and weaknesses.

INSERVICE TRAINING

The advisory committee and work group will need inservice training in the following areas:

1. using pretest data to establish tentative criteria,
2. deciding which strategy to employ in setting minimums,
3. gathering opinions on minimums levels from various audiences, and
4. communicating the process, the final minimum competencies, and the results of the first measurement.

SUMMARY OF IMPORTANT CONSIDERATIONS

1. The process for setting standards is complex and very difficult.
2. The process should be sensitive to the needs and concerns of diverse audiences.
3. The process and results must be communicated candidly.
4. The major issues and the advantages and disadvantages to every alternative should be resolved and communicated openly.
5. However carefully the levels are set, the results will be meaningless unless the competencies are clearly defined and accurately measured.

CHAPTER V

PLANNING INSTRUCTIONAL ALTERNATIVES

INTRODUCTION

What will be done for students who do not achieve the minimum competencies?

When students at any level are identified as deficient in the minimum competencies adopted by the board of education, alternative learning plans should be made available to them. An alternative learning plan gives the student another opportunity to learn, perhaps with a different method or different materials.

Careful planning is needed to respond to specific deficiencies. The planning should be directed to:

1. analyzing needs,
2. selecting or adapting alternatives,
3. implementing instructional alternatives, and
4. determining whether the needs are met.

ANALYZING NEEDS

An immediate concern is the diagnosis of student needs. Wherever possible, data that are already available should be used to gather information about the specific nature of the student's learning problems and needs. For example, the district's testing program may indicate how the student responded to each item in a test instrument, provide student profiles, or include achievement/ability comparison. Informal assessments conducted by teachers are another source of diagnostic information. Sometimes it is necessary to administer additional diagnostic measures.

For diagnosing hard-to-identify strengths and weaknesses, the district should use multiple sources of diagnostic information, calling upon specialists when needed. Sometimes the building principal will call a meeting of all persons concerned with a particular student to analyze a student's needs and to organize a plan of action. Persons involved may be classroom teachers, remedial teachers, parents, psychologist, health personnel, social worker, vocational counselor and anyone else concerned with the student's welfare.[1]

A worksheet may be helpful.

[1]Adapted from *A Handbook of Circumventive Teaching Strategies*, Ohio Department of Education, Division of Special Education, Project Expand.

SELECTING OR ADAPTING ALTERNATIVES

Once student needs are analyzed, district personnel will have to make decisions about appropriate alternatives to assist students in achieving competencies. A number of students may have similar learning needs which can be addressed with class instruction. Other needs may be so unique as to require one-on-one instruction. At times, a district may need to reallocate resources.

Typical questions that school personnel and parents must consider are:[2]

1. What alternative learning plans do we want to use?
2. How can alternatives be implemented?
3. What resources do we now have?
   a. materials
   b. staff
   c. support personnel
   d. facilities
   e. other
4. What additional resources do we need?
   a. materials
   b. staff
   c. support personnel
   d. facilities
   e. other
5. What additional costs will there be?
   a. materials
   b. staff
   c. support personnel
   d. facilities
   e. other
6. How much time will be devoted to the alternative learning plans?
   a. initially
   b. ongoing
7. What existing programs can be eliminated?
8. What existing programs can be altered to meet the identified needs?

Most school districts in Ohio have some programs for remediation in operation. Many have ESEA Title I funded programs that focus on improving student competencies in reading and mathematics. Thousands of students have learning opportunities extended with programs designed to meet specific needs supported by Disadvantaged Pupil Program Funds. Other students are involved in activities such as Occupational Work Experience (OWE) or additional work opportunities.

[2]Adapted from Gene E. Hall and Howard L. Jones, *Competency-Based Education: A Process for the Improvement of Education*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1976, pp. 274-276.

Some of the alternative learning plans listed below may be more appropriate for younger students; others may align more closely with high school needs; some may be adapted for any age level. Following are some options for the school district to consider to assist students achieve minimum competencies.

Separate Remedial Course

Remediation is provided in a modified curriculum designed to focus on identified competencies. A remedial course may offer varied instruction: one-to-one, independent or small-group. Materials are differentiated to meet pupil needs. The remedial environment is similar to a classroom.

A remedial course generally lasts for at least one grading period but often extends beyond this period of time. At the junior high and high school levels, remedial courses may be voluntary or required. Some districts give a unit of credit for successfully completing a remedial course.

Remedial courses are generally designed for students who are functioning two or more years below grade level.

These courses are usually taught by a certificated teacher who has extensive training or experience in the particular subject area. A teacher aide is frequently assigned to help the remedial course teacher.

Individual Tutoring

Tutoring is designed to assist a student who needs intensive instruction in specified competencies. Tutoring may be used to reinforce skills already presented by the classroom teacher. Tutoring may be used to review basic skills. Materials focus on the competencies needed, the student's learning style, and interest. Teacher-made materials are often used in tutoring.

Tutoring may occur during a study hall period, before or after school, or regularly during the school day. The amount of time depends on the severity of the need. The location for tutoring varies. It may be arranged in the regular classroom or in any quiet place where two people can sit down to work together. The tutoring ratio is most generally one to one but, occasionally, a tutor works with two or three students at a time.

The tutor may be a certificated teacher, part-time teacher, teacher's aide, volunteer, parent or student. In peer tutoring, a student is paired with another student of the same age to work on identified competencies or to practice specific skills. Another kind of tutoring, cross-grade tutoring, involves upper-grade students in instructional activities with lower-grade students.

Special Resource Rooms

In some buildings, an extra room has been designated as a reading resource room, a mathematics resource room or a skills resource room. Varied materials for all grade levels provide expanded opportunities for students to learn in the specified areas.

When a problem is diagnosed, the student may be scheduled into the resource room on a regular basis to work on a particular competency. Students from several grade levels may be scheduled at the same time. The resource teacher may have audiovisual learning materials arranged for independent study by some students while the teacher works with other students in a small group. An aide may tutor a student in another part of the resource room.

The special resource room is an extension of the regular classroom and requires coordination of instructional plans and staff cooperation.

Special Needs Group

Groups are organized to develop a skill, provide a particular experience, or develop and extend a given competency. When the learning has taken place, the group is dissolved and new groups are formed to meet other needs. Existing materials may be modified or new materials selected to meet the particular needs of the group.

Two facts are clear regarding grouping. First, students do learn from each other as they assist or challenge their peers through interaction. Second, when teachers are freed from the constraints of the lecture approach, they are more able to aid, stimulate and evaluate students in individual ways. Grouping can take several forms within any classroom, the remedial course or the special resource room:

1. achievement grouping (the class is divided into two or more groups representing the different levels of performance),
2. pair grouping (students are given a specific task to accomplish),
3. tutorial grouping (a person who has achieved the competency can be teamed with one or more pupils who are having trouble; the tutor reinforces his own mastery while helping the others), and
4. random grouping (the most important element in random grouping is that interaction is encouraged; each student has the opportunity to verbalize his thinking and to question others).[3]

In some school districts, the staff has found time for special needs groups by altering the schedule for art, music or physical education. For example, while the class is being instructed by the art teacher, the classroom teacher arranges instruction for the special needs group. These students are scheduled for art, music or physical education with another class.

Integrating Competency Requirements in the Regular Curriculum

To do this, the school district may:

1. provide a bank of suggested activities coded to each minimum competency,
2. provide an inventory of resources and instructional materials coded to each minimum competency,
3. appoint a member of the staff at each level as a resource person for specific competency areas, and
4. encourage teachers to exchange classes for specific purposes.

Varying Learning Materials Within the Regular Classroom

Teachers find they can approach competencies for students in a new way by:

1. introducing different materials,
2. modifying existing materials,
3. designing their own materials to reinforce skills and require application, and
4. classifying materials for use in achieving specific competencies.

[3]*Teaching Teen Reading Series*, Number VIII, Ohio Department of Education, Division of Educational Redesign and Renewal, Columbus.

Adjusting Instruction Within the Regular Classroom to Different Learning Styles

Teachers sometimes find they can help students achieve competencies by:

1. identifying the unique characteristics of students (e.g., if the student is primarily an auditory learner, the teacher will give verbal as well as written directions for assignments),
2. extending an instructional sequence (e.g., have student drill on essential information, reciting information into tape recorder, and playing it back),
3. restructuring an instructional sequence (e.g., break assignments down into short tasks; follow each task with repetition and reinforcement built into the structure),
4. developing alternative competencies or performance requirements to provide additional opportunities to demonstrate achievement of the intended competency (e.g., look for alternative ways to evaluate student's learning: projects, interviews, tapes, discussions, cartoons, skits),
5. changing pace (e.g., provide varied activities within shorter periods; alternate types of activities frequently), and
6. increasing student-teacher contact time (e.g., have frequent, even if short, one-to-one conferences with students; help them restate what they are responsible for; help them assess their progress toward completion of work).

Corrective Instruction

Within the regular classroom, corrective instruction is designed to meet the immediate needs of students. The teacher can detect skill problems in their early stages, administer preventive strategies, and distribute needed correction with regularity as well as consistency.

Corrective instruction can be described as a four-step procedure:[4]

1. Determine a specific skill need.
2. Identify those students who have not achieved the identified competency.
3. Teach for the skill.
4. Test to make certain that the children have achieved an appropriate competency level; if not, provide additional instruction.

Individualizing Instruction in the Content Areas

An informal assessment of the student's knowledge or skill can be constructed in any subject. The student's needs become the basis for teaching activities.

Writing a study guide can focus direction for student mastery of specific competencies. Teachers can provide guidance through structure, such as explaining the purpose for reading.

Varying assignment length and requiring mastery of fewer understandings may help some students achieve minimum competencies. Wise use of media can supplement instruction.

[4]*Teaching Early Reading*, Ohio Department of Education, Division of Educational Redesign and Renewal, Columbus, 1976, pp. 93-100.

The teacher can require different degrees of understanding and amounts of time on the lesson to correspond to individual student differences. The teacher should analyze the content to locate the most important sections needed for achieving competencies One student may achieve mastery of certain understandings in a 45-minute period; another may need a week or more.[5]

Learning Modules

Modules are self-instruction packages that contain a set of learning experiences. Learning modules are available commercially and may also be developed by teachers to meet specific needs. Learning modules should be organized in a format that is agreed upon in the district. Generally, sections of the learning module are:

1. a statement of rationale directed to the learner,
2. objectives (what are the learning outcomes?),
3. pretest to determine the student's needs,
4. a set of learning activities designed to help the student attain the desired competencies (objectives), and
5. posttest to determine whether or not the learner has mastered the competencies.

Programmed Instruction

Based on studies in behavioral psychology, programmed instruction presents carefully constructed information units in a sequential manner. The learner is guided through the sequence until a specified performance level is reached. As each unit is completed, the student is directed to proceed. On the other hand, a wrong response to the unit may require restudying the materials before moving on.

Programmed instruction provides a means for individualized instruction and promotes independent study. The teacher can guide and direct the student's individual needs.

One difficulty with using programmed instruction in the competency program may be the lack of a relevant program designed for particular competencies.

Learning Contracts

A mutual agreement may be entered into by the student, teacher and, in some cases, the parent, outlining the skills, knowledge and concepts to be learned by the student. To add credibility to the learning contract, it should be in writing and bear the signatures of the participants.

Specifics in terms of time and the degree of proficiency to be attained should be stated. Materials, exercises and experiences should be recommended.

Tracking

The school may use a tracking organization to provide intensive instruction in minimum competencies if a number of students need remediation. For example, all ninth-grade students who do not achieve the required competencies can be scheduled into one mathematics class where instruction is focused on the needed skills.

[5]*Teaching Teen Reading Series*, Number VIII, Ohio Department of Education, Division of Educational Redesign and Renewal, Columbus.

New Course Offering

In some districts, curriculum for a new course is based upon assessed competencies. Sometimes district policy stipulates that students have to take the new course in addition to the credits required for graduation. That is, the student must take the competency-based mathematics course in addition to the graduation requirement of one unit of credit in mathematics.

Independent Study

The student engaged in independent study must demonstrate strong commitment for responsibility and the related freedom. Independent study is not likely to be appropriate for the student who has not mastered the minimum competencies; however, teachers may find time for working with these students while more able students pursue independent study.

Highly structured independent study, such as programmed instruction, may be effective with the skills deficient student.

Home—School—Social Agency

If the teacher has used all available instructional alternatives available at the school level and the student still has not achieved the competencies, the teacher may request additional support from the principal. The principal may need to contact the school social worker, children's social services, school psychologist or community guidance center to explore other alternatives. Working with the student's home, the social worker may enlist other support services that will focus on alleviating needs that may be hindering learning. Sometimes nurses or social workers can gain support from parents that will help the student achieve the desired competencies.

Alternative Schools[6]

In some districts, educational options are offered to students. Such alternative programs are generally organized around specific interest areas, such as "fundamental academy", "multiage, nongraded" and "city-wide learning community".

Retention

When the student has not achieved the required competencies and has not responded to the remediation offered, retention may be recommended. Some students need the additional time to achieve minimum competencies. The teaching/learning activities provided should enhance student growth, not simply repeat the program of the previous year.

Summer School

A competency-based summer school may be organized and implemented for students who have not achieved minimum competencies at the end of specified grade levels. The summer program could be individualized according to the need for competencies and prerequisite skills. Promotion to the succeeding grade may depend upon satisfactory completion of summer school.

Diagnostic/Prescriptive Teaching

A plan of action is designed to assist the student master the identified competencies. Diagnostic/prescriptive teaching is usually approached with an individual plan such as the IEP required for special

[6]*Alternative School Manual*, Department of Curriculum and Instruction, Cincinnati Public Schools, 1977.

education pupils. Generally, the plan of action is cooperatively developed with parents and school personnel. Copies of the prescribed plan are given to the parents and the student. It is understood that each plan will be reviewed periodically to determine needed adjustments. A typical individualized plan of action includes:

1. a summary of the student's level of performance in the measured competencies, and
2. a statement of the specific educational program to be made available to the pupil including the special services recommended.

IMPLEMENTING INSTRUCTIONAL ALTERNATIVES

After school personnel and parents have made decisions about the kind of remediation that seems to be best for the student, other decisions must be made about the most effective and efficient ways to get the job done.

Typical questions that must be considered as instructional plans are implemented are:[7]

1. What resources are needed?
2. Are we getting the results we thought we would get?
3. What changes are needed?
4. Are there unexpected outcomes?
5. Is additional inservice training needed?
6. Is everyone doing his or her part?
7. What is the actual cost?
8. What are the maintenance costs?
9. Will our resources support these alternatives on a regular basis?

DETERMINING WHETHER THE NEEDS ARE MET

The school district must determine if the remediation is successful. All parties involved will know that needs have been met when the student demonstrates mastery of the specified competencies.

But what about the student who does not achieve the minimum competencies? After all available resources and reasonable efforts have come to focus on the student's learning needs and the minimum competencies have not been achieved, what else can be done?

District personnel may determine that further instruction will not be beneficial to the student at this level of development. At that time, it is suggested an "appeal committee" be created to make judgments about the student's performance and the educational program that has been provided.

COMMUNICATION

Parent reporting systems are required by state minimum standards and annual progress report guidelines. Communication with parents is especially critical in minimum competency issues.

[7]Adapted from Gene E. Hall and Howard L. Jones, *Competency-Based Education: A Process for the Improvement of Education*, Prentice-Hall, Inc., Englewood Cliffs, New Jersey, 1976, pp. 274-276.

At the time assessment indicates the student is experiencing difficulty in achieving the competencies, school personnel must contact the parents. In conference, in written reports, and at every opportunity in between, the school has an obligation to tell the parents and the student:

1. the specific competencies that have not been mastered,
2. what alternative instructional plans are available,
3. what is being done at school to help the student,
4. that each of the parties involved has responsibilities if the desired outcomes are to be achieved, and
5. the results of reassessment.

INSERVICE[8]

The initial step toward relevant inservice activity is identifying the needs of staff. Procedures will vary from one setting to another. It is also important to recognize that there are differing sets of needs as the staff implements a minimum competency program. Teachers must have input into the planning and designing of staff development activities as needs surface from the competency program.

The following topics may be appropriate for inservice training:

1. analysis of assessment data,
2. diagnostic instruments; informal diagnosis,
3. prescriptive teaching,
4. selecting, utilizing, and developing appropriate instructional materials,
5. remediation in the regular classroom,
6. teaching content material remedially,
7. learning modalities,
8. mastery learning,
9. tailoring instruction to specific skill deficiencies,
10. grouping for special needs, and
11. involving parents in remediation.

SUMMARY OF IMPORTANT CONSIDERATIONS

1. School personnel, parents and the student share responsibility for helping the student who has not achieved minimum competencies.
2. Given the resources, school personnel and parents select an alternative learning plan that will address student needs and focus on specific outcomes.
3. District personnel are obligated to report to parents the student's level of achievement, the plan for remediation and the results.
4. Planning and implementing instructional alternatives may reveal needs for inservice training.
5. The school should not guarantee what it cannot realistically deliver.

[8]*Focus on Inservice Education*, Ohio Department of Education, Division of Educational Redesign and Renewal, Columbus, 1978, pp. 1-8.

CHAPTER VI

EVALUATING THE COMPETENCY PROGRAM

As with any instructional activity, a competency program should be evaluated. The evaluation could, of course, be formal, informal or a combination. Both the process and the results should be considered in the evaluation. Regardless of the procedure followed or the areas of evaluation, results should be used to assist in the continuing management of the competency effort. A sample checklist of possible questions is outlined below.

EVALUATION QUESTIONS

	Yes	No
1. Has a review of available data been conducted?	_____	_____
2. Has a budget been established?	_____	_____
3. Has a program director been assigned?	_____	_____
4. Have advisory committee representatives of the various interest groups in the community been selected?	_____	_____
5. Has a management plan been developed?	_____	_____
6. Have competencies been identified?	_____	_____
7. Have measures for selected competencies been chosen?	_____	_____
8. Have minimums been established for the selected competencies?	_____	_____
9. Have inservice activities been conducted for staff?	_____	_____
10. Have resources from other school districts been identified or contacted?	_____	_____
11. Has communication on the progress of the competency effort gone to:		
a. Parents	_____	_____
b. Teachers	_____	_____
c. Administrators	_____	_____
d. Students	_____	_____
e. Board members	_____	_____
f. Media	_____	_____
g. Other	_____	_____
12. Have plans been made for intervention with students who need help?	_____	_____

In addition to a review of the process, evaluation of the effect of the competency program on student achievement should be considered. That evaluation should, if possible, relate to the goals and objectives identified for the schools and should relate to the individual accomplishments of students.

The task of evaluation should be coordinated through the advisory committee and could be the responsibility of a working committee. Evaluation plans should be formalized early so that appropriate information is gathered. The evaluative process is an ongoing one; collected data can be used in making decisions related to the continuous improvement of the competency program.